

REMARKS

This application has been reviewed in light of the Office Action dated September 3, 2003. Claims 1-20 and 83 are pending in this application. Claims 21-82 have been cancelled, without prejudice or disclaimer of subject matter. Claims 1 and 13 have been amended to define still more clearly what Applicants regard as their invention. Claim 83 has been added to provide Applicants with a more complete scope of protection. Claim 1 is in independent form. Favorable reconsideration is requested.

Applicants enclose a Supplemental Information Disclosure Statement.

The Office Action objected to the drawings, stating that Figures 40-42 should be designated as --PRIOR ART--. Applicants enclose replacement sheets for Figures 40-42, which include the designation --PRIOR ART--. Applicants therefore request that this objection be withdrawn.

The Office Action objected to Claim 13 and Claim 29 related to antecedent basis. Cancellation of Claim 29 renders its objection moot. Claim 13 has been amended to improve antecedent basis of photoelectric conversion element. Applicants request withdrawal of this objection.

The Office Action rejected Claims 1-4, 7, 10-18, and 20 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,955,753 (Takahashi); rejected Claims 21-34 and 36 under 35 U.S.C. § 103(a) as being unpatentable over Takahashi in view of U.S. Patent No. 6,522,356 (Watanabe); rejected Claim 19 as being unpatentable over Takahashi in view of U.S. Patent No. 6,021,172 (Fossum et al.); rejected Claim 35 as being unpatentable over Takahashi in view of U.S. Patent No. 6,522,356 (Watanabe) and further in view of Fossum et al.; rejected Claims 5 and 8 as being unpatentable over Takahashi;

and rejected Claims 6 and 9 as being unpatentable over Takahashi in view of U.S. Patent No. 5,442,396 (Nakashiba et al.). Cancellation of Claims 21-36 renders their rejections moot. Applicants respectfully traverse these rejections.

Applicants submit that amended independent Claim 1, together with the remaining claims dependent thereon, are patentably distinct from Takahashi at least for the following reasons.

The aspect of the present invention set forth in Claim 1 is an image sensing apparatus having a plurality of unit cells, each cell including a plurality of photoelectric conversion elements and a common circuit shared by the plurality of photoelectric conversion elements, arranged in either one or two dimensions. In the apparatus, a distance between a center of mass of photo-receiving areas of adjoining photo-electric conversion elements included in a given unit cell is substantially equal to distances between the center of mass of the photo-receiving areas of the adjoining photoelectric conversion elements included in different unit cells at least in one direction, and a distance between the center of mass of the photo-receiving area of the photo-electric conversion element included in the given unit cell and the center of mass of a photo-receiving area of the adjoining photoelectric conversion element included in an adjoining unit cell.

One notable feature of Claim 1 is that the center of mass of photo-receiving areas of the photo-electric conversion elements are separated from each other at a substantially equal length, at least in one direction, regardless of which unit cells the photo-electric conversion elements belong to. Support for this feature in the specification can be found at least from page 19, line 9, to page 20, line 13. (It is to be understood, of course, that the scope of Claim 1 is not limited to the details of this embodiment.)

Takahashi, as understood by Applicants, relates to a solid-state image pickup apparatus and image pickup apparatus. The Office Action states at page 2 that Takahashi discloses an image sensing apparatus having a plurality of unit cells, each cell including a plurality of photoelectric elements and a common circuit shared by the plurality of photoelectric conversion elements, arranged in either one or two directions, wherein the plurality of photoelectric conversion elements are arranged at a predetermined interval. Applicants note that Takahashi merely discusses that a plurality of MOS capacitors are connected to a common circuit (floating diffusion 21 or MOS transistors 7-21). Applicants submit, however, that Takahashi does not teach or suggest an image pickup apparatus that includes a feature of the center of mass of the photo-receiving areas of the photo-electric conversion elements being separated from each other at a substantially equal length, at least in one direction, regardless of which unit cells the photo-electric conversion elements belong to, as recited in Claim 1.

Accordingly, Applicants submit that at least for this reason Claim 1 is patentable over Takahashi et al.

A review of the other art of record including Fossum et al. and Nakashiba et al. has failed to reveal anything that, in Applicants' opinion, would remedy the deficiencies of the art discussed above, as applied against the independent Claim 1 herein. Therefore, Claim 1 is respectfully submitted to be patentable over the art of record.

The other claims in this application depend indirectly or directly from Claim 1 discussed above, and, therefore, are submitted to be patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the

invention, individual consideration or reconsideration, as the case may be, of the patentability of each claim on its own merits is respectfully requested.

In view of the foregoing amendments and remarks, Applicants respectfully request favorable reconsideration and early passage to issue of the present application.

Applicants' undersigned attorney may be reached in our New York Office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address listed below.

Respectfully submitted,


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